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BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
HOLLOWAY, JASON R	

ART UNIT	PAPER NUMBER
3633	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,142	SEIDEL ET AL.	
	Examiner	Art Unit	
	JASON HOLLOWAY	3633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 7, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maliszewski et al. (6,467,233) in view of Ollgaard (US 2003/0147753).

Regarding claim 1, Maliszewski et al. teaches a tower having a height ranging between a minimum height and a maximum height (column 2 lines 32-34 teaches a range of height), in particular for a wind energy turbine (abstract teaches wind generator), comprising:

a first tower segment (one of 12 or 14 of figure 2, the examiner notes that up to four tower segments are taught by Maliszewski depending on the desired height of the tower; Maliszewski discloses: “In towers over 80 meters in height, four sections are contemplated, namely a bottom section 12, an upper section 14, and two additional sections”) comprising a steel tube (column 2 lines 15-18 teach steel construction) having a predetermined length (column 2 lines 2-4 teaches the size of the segments are chosen based on the designed tower height),

a second conical tower segment (one of the four tower segments noted above) comprising a steel tube (column 2 lines 15-18 teach steel construction) having a

predetermined length (column 2 lines 2-4 teaches the size of the segments are chosen based on the designed tower height), the diameter of the first conical tower segment at a lower end being equal to the diameter of the second conical tower segment at an upper end (the examiner construes from figure 2 that the bottom of conical section 58 is the same diameter as the top of conical section 56 since sections 38-48 are the same diameter as the top and bottom of the conical sections 56 and 58), and

a first variable-length cylindrical tower segment (one of the four tower segments noted above) comprising a steel tube (column 2 lines 15-18 teach steel construction) having a length that can be varied. (The examiner construes that since Maliszewski discloses towers between 60 and 80 meters are comprised of three sections, the lengths of those sections would need to be variable lengths. For instance, to create a tower with a height of 60 meters, three 20 meter segments would be used, with the three segment lengths adding up to the total length of 60 meters. In order to create an 80 foot tower using three segments, three sections approximately 26.7 meters in length would be used. Since different length tower segments would need to be used to create the towers of Maliszewski, the lengths of the sections would need to be varied, thus, the limitations of the claim as amended are met).

wherein the length of the first cylindrical tower segment (one of the four tower segments noted above) is capable of being adapted to the necessary height of the tower between its minimum height and its maximum height.

However, Maliszewski et al. fails to explicitly disclose the first cylindrical tower segment has a length between a predetermined minimum length and a predetermined

maximum length, the minimum height being the sum of the predetermined lengths of the first and second conical tower segments and the minimum length of the first cylindrical tower segment, and the maximum height being the sum of the predetermined lengths of the first and second conical tower segments and the maximum length of the first cylindrical tower segment.

Maliszewski et al. discloses: "The towers of this invention can range in height from 32 to over 80 meters" (column 2 lines 32-34); parameters for tower segments for towers which are within the range of 50 meters (column 2 lines 35-37); parameters for tower segments which are within the range of 60-80 meters (column 3 lines 23-26); for the conical segments, the lengths are determined based on the design height of the tower (column 4 lines 2-4); and claims 10 and 16 claim the exact number of segments for different design tower heights.

Therefore, it would have been obvious to one of ordinary skill in the art to determine that the different segments of the tower of Maliszewski et al. have maximum and minimum predetermined lengths in order to create towers at the desired height specifications using an exact amount of segment sections. Further, it would have been obvious to one of ordinary skill in the art to use appropriate heights for the tower segments since it has been held that changes in size and/or proportion do not constitute patentable subject matter if the claimed relative dimensions would not perform differently than the prior art device (In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984)).

However, Maliszewski fails to explicitly disclose the first conical tower segment is to be coupled to the second conical tower segment in an assembled condition and the second conical tower segment is to be coupled to the first variable-length cylindrical tower in the assembled condition. In the tower of Maliszewski, conical tower segments are connected indirectly via cylindrical segments 38-50 which are placed between, thus they are connected to each other, the examiner notes they are not required by the claim to be in direct abutting contact with one another. Regarding the newly added claim limitations, the examiner contends that any of the segments could be a variable-length tower segment based on the disclosure of Maliszewski and addressed above.

Further, Ollgaard teaches a wind turbine tower in which multiple conical tower segments are coupled to one another in an assembled condition, and wherein the diameter of the first conical tower segment at a lower end is equal to the diameter of the second conical tower segment at an upper end (turbine tower sections 11-14 as illustrated in figure 1b).

Therefore, from the teaching of Ollgaard, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the partial cylindrical/conical tower segments of Maliszewski with the teaching of all conical sections as disclosed in Ollgaard since having all conical sections would make the apparatus stronger by creating a wider and heavier base section.

Regarding claim 2, Maliszewski et al. teaches the first variable-length (variable length as address in claim 1) cylindrical tower segment (segment 12 of figure 2) comprises a door opening (21, column 3 lines 36-41).

Regarding claim 3, Maliszewski et al. teaches a second cylindrical tower segment (one of the four tower segments noted above) comprising a steel tube (column 2 lines 15-18 teach steel construction) having a door opening (21, column 3 lines 36-41) and a length,

However, Maliszewski et al. fails to explicitly disclose the minimum height of the tower is the sum of the predetermined lengths of the first and second conical tower segments, the minimum length of the first cylindrical tower segment and the length of the second cylindrical tower segment and wherein the maximum height of the tower is the sum of the predetermined lengths of the first and second conical tower segments, the maximum length of the first cylindrical tower segment and the length of the second cylindrical tower segment.

Maliszewski et al. discloses: “The towers of this invention can range in height from 32 to over 80 meters” (column 2 lines 32-34); parameters for tower segments for towers which are within the range of 50 meters (column 2 lines 35-37); parameters for tower segments which are within the range of 60-80 meters (column 2 lines 23-26); for the conical segments, the lengths are determined based on the design height of the tower (column 2 lines 2-4); and claims 10 and 16 claim the exact number of segments for different design tower heights.

Therefore, it would have been obvious to one of ordinary skill in the art to determine that the different segments of the tower of Maliszewski et al. have maximum and minimum predetermined lengths in order to create towers at the desired height specifications using an exact amount of segment sections. Further, it would have been

obvious to one of ordinary skill in the art to use appropriate heights for the tower segments since it has been held that changes in size and/or proportion do not constitute patentable subject matter if the claimed relative dimensions would not perform differently than the prior art device (In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984)).

Regarding claim 4, Maliszewski et al. teaches cylindrical (the four tower segments noted above) tower segments having lengths (as illustrated in figure 2).

However, Maliszewski et al. fails to explicitly disclose the length of the second cylindrical tower segment is selectable between a predetermined minimum length and a predetermined maximum length, wherein the minimum height of the tower is the sum of the predetermined lengths of the first variable length cylindrical tower segment and second conical tower segments and the minimum lengths of the first and second cylindrical tower segments and wherein the maximum height of the tower is the sum of the predetermined lengths of the first variable length cylindrical tower segment and second conical tower segments and the maximum lengths of the first and second cylindrical tower segments.

Maliszewski et al. discloses: “The towers of this invention can range in height from 32 to over 80 meters” (column 2 lines 32-34); parameters for tower segments for towers which are within the range of 50 meters (column 2 lines 35-37); parameters for tower segments which are within the range of 60-80 meters (column 2 lines 23-26); for the conical segments, the lengths are determined based on the design height of the

tower (column 2 lines 2-4); and claims 10 and 16 claim the exact number of segments for different design tower heights.

Therefore, it would have been obvious to one of ordinary skill in the art to determine that the different segments of the tower of Maliszewski et al. have maximum and minimum predetermined lengths in order to create towers at the desired height specifications using an exact amount of segment sections. Further, it would have been obvious to one of ordinary skill in the art to use appropriate heights for the tower segments since it has been held that changes in size and/or proportion do not constitute patentable subject matter if the claimed relative dimensions would not perform differently than the prior art device (In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984)).

Regarding claim 12, Maliszewski et al. teaches the first variable length cylindrical tower segment (12) and the second cylindrical tower segment (14) each comprise an essential constant wall thickness over their length (the examiner construes from column 1 lines 29-30 and column 2 lines 53-56 that since the outer diameter of the cylinders are identical, the inner diameters are also obviously identical. Further, it is widely well known in the art to construct inner cylinder wall diameters which are identical from one end to the next).

3. Claims 5, 6, 7, 10 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maliszewski et al. (6,467,233) in view of Ollgaard (US

2003/0147753), as applied to claims 1 and 13 above, and further in view of Tadros et al. (US 2003/0000165).

Regarding claims 5 and 6, Maliszewski et al. teaches a tower further segment (one of the four segments described in the rejection to claim 1 above) which is reinforced by a concrete foundation (column 2 lines 35-45) comprising a door opening (21) and having a length, and

a connecting element (56) for connecting the first variable length cylindrical tower segment (12) with the further tower segment (14) and having a length (the conical segment 56 is the connecting element between segments 12 and 14, wherein the sub-segments (i.e. 22, 24, 28, 30, etc) are welded to one another, essentially forming a single tower segment),

However, Maliszewski et al. fails to explicitly disclose the minimum height of the tower is the sum of the predetermined lengths of the first and second conical tower segments, the minimum length of the first cylindrical tower segment and the lengths of the further tower segment and the connecting element and wherein the maximum height of the tower is the sum of the predetermined lengths of the first and second conical tower segments, the maximum length of the first cylindrical tower segment and the lengths of the further tower segment and the connecting element.

Maliszewski et al. discloses: “The towers of this invention can range in height from 32 to over 80 meters” (column 2 lines 32-34); parameters for tower segments for towers which are within the range of 50 meters (column 2 lines 35-37); parameters for tower segments which are within the range of 60-80 meters (column 2 lines 23-26); for

the conical segments, the lengths are determined based on the design height of the tower (column 2 lines 2-4); and claims 10 and 16 claim the exact number of segments for different design tower heights.

Therefore, it would have been obvious to one of ordinary skill in the art to determine that the different segments of the tower of Maliszewski et al. have maximum and minimum predetermined lengths in order to create towers at the desired height specifications using an exact amount of segment sections. Further, it would have been obvious to one of ordinary skill in the art to use appropriate heights for the tower segments since it has been held that changes in size and/or proportion do not constitute patentable subject matter if the claimed relative dimensions would not perform differently than the prior art device (In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984)).

Further, Maliszewski et al. fails to explicitly disclose a lower tower segment that is formed of a prestressed concrete tube.

Tadros teaches a precast post-tensioned pole system for a wind tower wherein a lower tower segment is formed of a prestressed concrete tube (see abstract figures 2-3; post-tensioning is a known process involved with prestressed structures).

Therefore, from the teaching of Tadros, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the metal base segment of Maliszewski et al. with a prestressed concrete tube as taught by Tadros in order to provide a tower having increased compression strength compared to that of a metal base.

Regarding claims 7 and 10, the combination of Maliszewski and Ollgaard teaches a further tower segment (one of the 4 sections noted in the rejection to claim 1) is of a conical configuration (conical sections via Ollgaard as addressed in claim 1).

Regarding claim 13, the claim is rejected under the combination of Maliszewski and Ollgaard and Tadros for the same reasons as applied to claims 1 and 5 above, including the added limitations of a further tower segment having the same variable length limitations and coupled to an adjacent conical tower section in the same manner as a first and second section. Ollgaard teaches multiple tower sections connected to one another having the same diameters at the connections. Maliszewski teaches a tower that can exceed 80 meters at column 2 lines 32-34.

Regarding claim 14, the combination of Maliszewski and Ollgaard teaches a further tower segment can be made of a steel tube (in Maliszewski column 2 lines 16-21 and in Ollgaard [0003]). Maliszewski teaches towers can be greater than 80 meters in height, it would have been obvious to one of ordinary skill in the art to make the towers 85 meters depending on the height needed.

Regarding claim 15, the combination of Maliszewski, Ollgaard and Tadros teaches the further tower segment comprises prestressed-concrete (Tadros teaches a tower section made from prestressed concrete as described in the rejection for claim 5 above) having a door opening (21, column 3 lines 36-41 of Maliszewski teaches a door opening), and wherein the maximum height is over 80 meters.

However, the combination of Maliszewski Ollgaard and Tadros fails to explicitly disclose the tower height is approximately one hundred meters. It would have been

obvious to one of ordinary skill in the art to make the towers 85 meters depending on the height needed. Further, it would have been an obvious matter of design choice to make the tower of the combination of Maliszewski, Ollgaard and Tadros have a height of 100 meters, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Regarding claim 16, the combination of Maliszewski and Ollgaard teaches the further tower segment comprises a connecting element for connecting the first variable-length cylindrical tower segment with the further tower segment (column 3 lines 22-35 of Maliszewski teaches the segments can be connected via bolts, transition rings, and welding; figure 3 of Ollgaard shows the connection between segments).

4. Claims 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maliszewski et al. (6,467,233) in view of Ollgaard (US 2003/0147753) and further in view of Tadros et al. (US 2003/0000165) and further in view of Farber (5,513,477).

Regarding claim 8, Maliszewski et al. teaches conical sections (56, 58) with varying wall thicknesses depending on need disposed within the tower (column 2 lines 9-22). However, the combination of Maliszewski, Ollgaard and Tadros fails to explicitly disclose the conical sections have a wall thickness decreasing towards their upper ends in the installed condition of the tower.

Farber teaches graded structural utility poles which have a wall thickness decreasing towards their upper ends in the installed condition (as illustrated in figures 3, 7, and 8).

Therefore, from the teaching of Farber, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wall thicknesses of the conical segments of Maliszewski et al. with the decreasing wall thicknesses as disclosed in Farber in order to further reduce the material costs of the steel segments since less material would be required.

Regarding claim 9, Maliszewski et al. teaches the first variable length cylindrical tower segment (12) and the second cylindrical tower segment (14) each comprise an essential constant wall thickness over their length (the examiner construes from column 1 lines 29-30 and column 2 lines 53-56 that since the outer diameter of the cylinders are identical, the inner diameters are also inherently identical. Further, it is notoriously well known in the art to construct inner cylinder wall diameters which are identical from one end to the next).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maliszewski et al. (6,467,233) in view of Ollgaard (US 2003/0147753) and further in view of Farber (5,513,477).

Regarding claim 11, the claim comprises the same limitations as rejected claim 8 above and is therefore rejected under the same rationale.

Response to Arguments

Applicant's arguments filed 27 April 2010 have been fully considered but they are not persuasive.

The applicant's arguments in the remarks page 8 lines 1-15 appear to be drawn toward the Maliszewski reference individually. The examiner notes that Ollgaard was

used as a secondary reference to teach the particular layout of the applicant's claims wherein conical tower segments are connected to one another. Maliszewski teaches the use of variable length segments to acquire the desired tower height.

Regarding applicants arguments on page 9 lines 1-11, the examiner respectfully disagrees. Even if Maliszewski varies the height of the towers by adding sections, he still teaches only 2-4 sections are ever used. For instance, if a 60-80 meter tower is built, three sections will be used to build it. That means a 60 meter tower will have different length sections than the 80 meter tower, thus the sections are variable length.

Regarding applicant's arguments with respect to the Tadros reference, the examiner respectfully disagrees. Tadros was merely used to teach it would have been obvious to use a pre-stressed concrete tube, a door is taught by Maliszewski. Regarding the applicants argument on page 14 that combining Maliszewski with Tadros would make it impossible for maintenance to access the door and ladder, the examiner contends it would have been obvous to design the base segment to allow both the door opening and ladder to remain, the combination does not suggest taking out any of the fundamental characteristics of the Maliszewski tower.

Applicant's remaining arguments have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON HOLLOWAY whose telephone number is (571) 270-5786. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Dunn can be reached on 571-272-6670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JASON HOLLOWAY
Examiner
Art Unit 3633

JH

/Brian E. Glessner/
Primary Examiner, Art Unit 3633